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LAITOS

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NHIS HC 83.00
The NASA ERTS-1 Project
Number SR 0580-3 and 9614-2

E7.2 - 10.2.9.7
CR - 129289

First Type I Progress Report, December 12, 1972

Title of investigation:

Major Crustal Fractures in the Baltic Shield

Principal Investigator:

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The objective of the project is to study
The major fracture and fault zones of the Baltic Shield and their
relationships to mineral deposits.

Since the first images were not received until late October 1972 the first
Type I Progress report could not be submitted within three months after
the ERTS-1 launch date.

Following MSS products, with all four bands, have been received.

1038-09261	cloud cover	90%, not useful
1038-09263	- " -	65%, - " -
1039-09315	- " -	0%, good
1039-09322	- " -	5%, - " -
1040-09371	- " -	20%, - " -
1040-09374	- " -	50%, useful

There are Newton rings in the 70 mm positives and negatives and the latter
are overdeveloped. This hampers the processing of new prints.

So far, only a preliminary examination of the images has been made.
Black-and-white paperprints 1:400 000, as well as various false color
prints, have been prepared from the best ones. A thorough analysis of the
images and their correlation with data from ground and airborne surveys
have been started.

No articles or papers have been published during the reporting period.

Following results may be reported from a first look at the

(E72-10297) MAJOR CRUSTAL FRACTURES IN
THE BALTIC SHIELD Progress Report H.V.
Tuominen (Helsinki Univ.) 12 Dec. 1972
7 p

CSCS 08E

N73-13347

Unclas
G3/13 00297

SHIELD GEOLOGY OF FINNISH LAPLAND

The bands for images 1039-09322, 1039-09315 and 1040-09371 provide a detailed picture of a zone extending 500 km north-northeast from the northern coast of Gulf of Bothnia. Highways (on bands 0.5-0.6 and 0.6-0.7), rivers (bands 0.7-0.8, 0.8-1.1) and bare fell tops, for instance, are visible.

Schist belts, as known from ground surveys, can be discerned from areas occupied by their basement rocks or major plutons. A number of sharp lineaments, apparently faults, are visible. Some major fracture zones, up to 50 km wide, that form distinct lineaments in weather satellite pictures and belong to the main objects of this study, are rather indistinct in the images but can be traced.

Heikki V. Tuominen
Principal Investigator

ERTS IMAGE DESCRIPTOR FORM

(See Instructions on Back)

DATE 28 Nov 1972

PRINCIPAL INVESTIGATOR Dr. Heikki V. Tuominen

GSFC SR-580-3

ORGANIZATION Dept. of Geology, University of Helsinki

NDPF USE ONLY

D _____

N _____

ID _____

PRODUCT ID (INCLUDE BAND AND PRODUCT)	FREQUENTLY USED DESCRIPTORS*			DESCRIPTORS
	Schist	Fault	Geofractures	
1039-09315-M	Selt	Block		Esker
do.				Fault
do.				Fold
do.				Glacifluvial delta
do.				Lineament
do.				Rock Formation
1039-09315-4				Block Field
do.				Eolian Activity
1039-09315-5	v	v	v	Bedrock Ridge
do.				Block Field
do.				Drumlin
do.				Glacifluvial Deposit
do.				Eolian Activity
do.				Outwash Plain
do.				Peat Bog
1039-09315-6	v	v	v	Bedrock Ridge
do.				Drumlin
do.				Eolian Activity
do.				Massif
do.				Peat Bog
1039-09315-7	v	v	v	Bedrock Ridge
do.				Drumlin

*FOR DESCRIPTORS WHICH WILL OCCUR FREQUENTLY, WRITE THE DESCRIPTOR TERMS IN THESE COLUMN HEADING SPACES NOW AND USE A CHECK (✓) MARK IN THE APPROPRIATE PRODUCT ID LINES. (FOR OTHER DESCRIPTORS, WRITE THE TERM UNDER THE DESCRIPTORS COLUMN).

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PRODUCT ID (INCLUDE BAND AND PRODUCT)	FREQUENTLY USED DESCRIPTORS*			DESCRIPTORS
1039-09315-7 do.				Massif Peat Bog
1038-09261-M				Clouds
1038-09263-M				Clouds

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PRODUCT ID (INCLUDE BAND AND PRODUCT)	FREQUENTLY USED DESCRIPTORS*			DESCRIPTORS
	Fault	Rock	Fold	
1039-09322-M	v	Formation		Bedrock Ridge
do.				Formation Boundary
do.				Fluvial Deposit
do.				Lineament
1039-09322-4				Ancient Shoreline
do.				Block Field
do.				Open Pit Mine
1039-09322-5		v	v	Ancient Shoreline
do.				Block Field
do.				Esker
do.				Glacifluvial Delta
do.				Drumlin
do.				Open Pit Mine
do.				Peat Bog
1039-09322-6		v	v	Esker
do.				Peat Bog
do.				Schist Belt
1039-09322-7		v	v	Esker
do.				Drumlin
do.				Peat Bog
do.				Schist Belt
do.				Glacial Fluting

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PRODUCT ID (INCLUDE BAND AND PRODUCT)	FREQUENTLY USED DESCRIPTORS*			DESCRIPTORS
	Rock	Esker	Massif	
1040-09371-M	Formation			Drumlin
do.				Fault
do.				Fault Block
do.				Fold
do.				Geofracture
do.				Lineament
1040-09371-4	v			Block Field
do.				Eolian Activity
do.				Fluvial Deposit
1040-09371-5	v	v	v	Block Field
do.				Eolian Activity
do.				Exposed Area
do.				Fluvial Deposit
do.				Peat Bog
1040-09371-6	v	v	v	Moraine
1040-09371-7	v	v	v	Moraine
1040-09371-M				Clouds

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PRODUCT ID (INCLUDE BAND AND PRODUCT)	FREQUENTLY USED DESCRIPTORS*			DESCRIPTORS
	Peat	Bedrock		
	Bog	Ridge		
1040-09374-M				Clouds
do.				Rock Formation
do.				Lineament
1040-09374-4				Block Field
do.				Fluvial Deposit
1040-09374-5	v	v		Block Field
do.				Fluvial Deposit
1040-09374-6	v	v		
1040-09374-7	v	v		

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